

**SITUATION REPORT NO. 18**

**INCIDENT NO. 96-01**

**DATE: December 24, 1996**

**TIME: 11 a.m.**

TO: Governor Edward T. Schafer  
State Capitol  
Bismarck, ND 58505

1. NATURE OF DISASTER: Spring Flood (continuing potential for 1997 problems).
2. DEATH AND INJURIES: A 41-year-old Heaton man drowned on October 29 after he lost control of his vehicle on N.D. Highway 200, one mile east of Hurdsfield, where flood waters had splashed over the roadway and had frozen. The Wells County Emergency Manager reported that the vehicle was found submerged in a ditch.
3. DAMAGE: The level of Devils Lake on December 23 was 1,437.78 feet MSL. Lake freeze-up occurred during the third week of November, 1996.

The N.D. State Water Commission (SWC) anticipates inflows and snowfall directly over the lake will cause Devils Lake to continue to slowly rise through the winter. As a result, Devils Lake will likely be near 1,438 feet MSL by the time of spring runoff next year. This winter, the SWC plans on conducting snow depth/water equivalent measurements to monitor conditions in the Devils Lake Basin.

As of December 23, the National Weather Service recorded an above average snow depth of 28 inches for the Devils Lake Basin. Other snow depths in the state on December 23 are as follows: nine inches in Bismarck; eight inches in Dickinson; 17 inches in Fargo; 27 inches in Grand Forks; 24 inches in Hettinger; 21 inches in Jamestown; 12 inches in Minot; 15 inches in Wahpeton; and, 15 inches in Williston.

N.D. Department of Transportation (N.D. DOT) officials are concerned that next spring permeable soil under N.D. Highway 20, and possibly other roads, will allow for waters to flow through the soil, resulting in flooding on either side of the roadway. Soil samples were recently taken in the Camp Grafton and Acorn Ridge areas, and are being evaluated by N.D. DOT's Materials and Research Division.

4. RESOURCES COMMITTED:

LOCAL: No change from previous reports.

STATE: No change from previous reports.

FEDERAL: No change from previous reports.

5. VOLUNTEER ACTIONS: No change from previous reports.
6. MAJOR ACTIONS: A State Flood Coordination Center meeting was held in Devils Lake, December 5, 1996. Following is a summary of information reported during that meeting.

## **North Dakota Emergency Management**

The Federal Emergency Management Agency (FEMA) has approved \$4.8 million for projects under the Hazard Mitigation Grant Program. Projects associated with FEMA-1001-DR-ND (1993) and FEMA-1032-DR-ND (1994) include: City of Grand Forks sewer lift station projects; City of Fargo flood wall, lift station, and sewer projects; City of Harwood buyout/relocation; Barnes County buyout; City of Langdon drainage; City of Valley City buyout/relocation; City of Jamestown lift station; and, City of Lisbon buyout/relocation. FEMA approval is pending for the City of Jamestown's oxbow project estimated to cost \$450,000.

For Disaster Declaration FEMA-1050-DR-ND (1995) and FEMA-1118-DR-ND (1996), approximately \$3.1 million is available for the Hazard Mitigation Grant Program. FEMA has approved approximately \$140,000 for the following projects: the N.D. Department of Transportation Highway Advisory Radio System in Devils Lake; the N.D. Parks and Recreation Department relocation of the Grahams Island State Park bait shop; and, the Burleigh County bank stabilization project. The State Hazard Mitigation Team has prioritized 14 applications for potential funding. The team will meet in January to prioritize application received by the December 31, 1996, deadline.

Under the Public Assistance Program, FEMA to date has approved funding for the past four disasters as follows: approximately \$8.2 million for FEMA-1001-DR-ND (1993); approximately \$4.3 million for FEMA-1032-DR-ND (1994); \$11 million for FEMA-1050-DR-ND (1995); and, \$11.1 million for FEMA-1118-DR-ND (1996).

Damage Survey Reports (DSRs) for the Public Assistance Program that have not been processed are as follows: two for the 1993 flood; 22 for the 1994 flood; 122 for the 1995 flood; and, 192 for the 1996 flood. These DSRs have not been processed because they are either suspended or are part of the transfer of function for inundated sites. Actual funding figures will be applied when these projects are approved or are no longer considered suspended sites. Most of the DSRs are inundated sites or hazard mitigation projects.

A Public Assistance report on the status of transfer of function for inundated sites shows 25 counties have eligible sites. Four counties received approval for their plans from North Dakota Emergency Management; letters have been sent to FEMA requesting release of funds. Other counties are either waiting for a determination on the amount of funding eligible for the transfer of function or are in the process of being contacted by North Dakota Emergency Management. One county has a site that will remain suspended because damages remain under water, preventing inspection.

### **N.D. National Guard**

A dike surrounding the sewage lagoon at Camp Gilbert C. Grafton was raised two feet this fall to approximately 1,444 feet MSL. Rip-rap along the lagoon has been repaired.

Camp Grafton will conduct berm work to protect the Engineer Training Site in anticipation of 1997 flood waters that could overtop N.D. Highway 20 and flow into the site.

### **N.D. State Water Commission (SWC)**

FEMA has allocated \$19,000 for the Devils Lake Flood Insurance Study. The U.S. Geological Survey is conducting the necessary hydrological tests. The project subcontractor, the St. Paul District of the U.S. Army Corps of Engineers (USACE), is conducting the mapping work. The Flood Insurance Study should be completed by March 1997. Study results will be used by the USACE to complete plans for the lake level protection for the city of Devils Lake.

Nineteen new sites added this fall to the Available Storage Acreage Program (ASAP) will provide 850 acre-feet of new storage for 1997 spring runoff. The SWC will continue this winter to accept

new ASAP applications. The SWC has options for the second year of storage on most of the 46 ASAP sites used in 1996. These sites provided approximately 8,000 acre-feet of storage. The SWC will be able to store additional water on these sites next spring to replace 1996 spring runoff lost to evaporation and ground infiltration.

#### **N.D. Game and Fish Department**

The boat ramps and parking lots at Six Mile Bay and East Bay will be surveyed the week of December 8-14 to determine the cost and the amount of fill needed to elevate the ramp areas to 1,441 feet MSL and 1,442 feet MSL, if required.

#### **N.D. Parks and Recreation Department**

Concrete and site work necessary for relocating the Grahams Island State Park bait shop has been completed. A Devils Lake construction firm will move the bait shop next March from its present elevation of 1,438.45 feet to 1,454 feet MSL. Sidewalk work for the project has not yet been completed. The bait shop, which is protected to 1,440 feet MSL, may be open this winter for ice fishing, depending on whether good ice conditions prevail for vehicle access on the lake.

#### **N.D. Department of Transportation**

Grade raise and bridge work on N.D. Highway 19 at Mauvais Coulee has been completed. The roadway was elevated to 1,445 feet MSL, and the bridge to 1,446.8 feet MSL.

Construction work on N.D. Highway 19 at Six Mile Bay will soon end for winter. The roadway will be elevated to 1,441 feet MSL, and the bridge to 1,448.5 feet MSL by July 1997. A contracting firm is still hauling fill material for the project, while the structural contractor is nearing completion of building bridge substructure units. That contractor expects to set beams in place before this year's construction season ends.

Construction workers have completed a temporary grade raise of N.D. Highway 57 at Fort Totten. The roadway was elevated to 1,442 feet MSL.

Grade raises are being designed for N.D. Highway 57 at four locations, including: Fort Totten; the former location of the Concrete Sectional plant; the Narrows area; and, the area south of Camp Grafton's main entrance and north of Acorn Ridge. N.D. DOT will let four separate contracts for bid in February.

Rip-rap for emergency repairs next spring is being stockpiled by N.D. DOT at the junction of U.S. Highway 281 and N.D. Highway 57.

Concrete barrier walls on N.D. Highway 57 have been removed for winter. Plans call for reinstalling these barriers next spring when lake ice melts.

#### **Lake Region District Health**

The Ramsey County Commission refused an order from Lake Region District Health to remove an abandoned house submerged in Devils Lake water at Creel Bay. The Health Unit is continuing efforts to seek funding from all sources to cover the cost for enforcing the movement of houses out of and away from Devils Lake.

#### **Indian Health Service, U.S. Health and Human Services**

Indian Health Service reported that work on basements for 20 Fort Totten homes has been completed. Ten of those homes have already been relocated from the Devils Lake floodplain. Sewer, water and electrical service has been installed for those homes, which are now at 1,450 feet MSL. A dispute about providing electrical services to these homes has been resolved.

Financing for relocating the homes was provided by U.S. Housing and Urban Development.

Indian Health Service officials expect next year that flood waters will force the relocation of another 20 homes.

## **U.S. Army Corps of Engineers (USACE)**

The USACE reported construction work is continuing on the first stage of a project to increase lake level protection for the city of Devils Lake by five feet. More than 60 percent of the levee has been brought to its final grade, and 45 percent of the rip-rap has been placed. The contractor is stockpiling rip-rap. Major modification work at the pump station and gatewell will be completed before mid-January. The targeted completion date is September 1, 1997.

The Devils Lake City Council has passed a resolution approving the alignment for the second stage of the project. The USACE anticipates completing plans and specifications by February 11, 1997.

## **Ramsey County Rural Utilities**

Ramsey County Rural Utilities shut down 16 lift stations and 60 accounts this year.

Utility officials are concerned that 1997 increases in lake elevation could contribute to the loss of service to the west side of Creel Bay because of inundation of the sewer main, which runs along N.D. Highway 19. The loss of the line would affect 133 sewer accounts and impact 80 water accounts. Officials are researching the cost for relocating the line.

Based on the assumption that the lake will continue to rise in 1997, the following conditions are likely to occur as the lake level reaches the elevation shown:

- 1,438 feet MSL  
The utility estimates that nine sewer septic tanks would be inundated, and four manholes will need to be raised, representing an annual revenue loss of \$1,440.
- 1,439 feet MSL  
Twelve septic tanks would be inundated, and one lift station would need to be raised, translating into an annual revenue loss of \$2,280.  
Any increase occurring between the lake's present elevation to 1,439 feet MSL would represent the loss of nine water accounts. The annual loss is estimated at \$4,860 for debt and use revenue.
- 1,440 feet MSL  
The utility estimates that 20 septic tanks would be in the water, and four manholes and two lift stations would have to be raised, representing an annual loss of \$3,960.  
A 1,439 to 1,440 MSL foot elevation would result in the loss of six water accounts and \$3,240 annually in debt and use revenue.
- 1,441 feet MSL  
This lake level would result in the inundation of 13 septic tanks and the need to elevate three manholes and one lift station. A loss of \$2,520 in revenue would result each year. Twelve water accounts would be lost if the lake rose to 1,440 to 1,441 feet MSL, accounting for an annual loss of \$6,480.

## **City of Devils Lake**

City engineering officials anticipate 1997 spring runoff will cause significant drainage problems in the north and east side of the city. Trouble spots include residential areas, Sweetwater School and Ruger Park. The city already experienced problems with runoff last year. The city engineer is

working with USACE to address short- and long-term problems.

Devils Lake officials have placed a request to USACE for the design of the third phase of the city's protection from rising lake waters. This phase will enable the city to obtain 100-year floodplain certification for the new levee.

### **Benson County Emergency Management**

Culverts still need to be placed on the Woods-Rutten Road near East Bay. The road was elevated to 1,444.5 feet MSL as part of the specifications outlined in the \$1.3 million project.

### **Ramsey County Emergency Management**

Eighty-three Ramsey County structures have been moved or are scheduled to be moved from the Devils Lake floodplain.

### **Nelson County Emergency Management**

The Nelson County Commission has asked its Emergency Manager to compile information about how the county would be affected if Devils Lake were to flow naturally into Stump Lake.

7. ASSISTANCE NEEDED: None at this time.
8. OUTSIDE HELP ON SCENE: No change from previous reports.
9. OTHER INFORMATION: Freeze up of most moving water has occurred in the state. Most lakes and pot holes in central and south central North Dakota have frozen up full of water, with minimal or no storage available for the spring of 1997 runoff. The lack of this storage could have the effect of additional damage to infrastructure and private property because of expanding lakes and pot holes, and a much higher runoff volume.

A meeting to discuss the Devils Lake Emergency Outlet Plan was conducted November 18 and attended by officials representing the USACE, the State of North Dakota, the Minnesota Department of Natural Resources and the Minnesota Pollution Control Agency. Discussions centered on the need for an outlet, the effectiveness of an outlet, the outlet costs, current and projected expenditures on roadwork in the Devils Lake Basin and the potential for an inlet.

A severe storm system started December 16, bringing freezing arctic temperatures, blowing snow and high winds. The storm has caused the closure of I-29 and I-94 and the cancellation of school in many North Dakota cities. The Grant County Commission has issued a Disaster Declaration, citing difficulties with transportation systems and snow removal efforts and loss of livestock and other property. Farmers report difficulties delivering hay to cattle. Sioux County officials report that six ranchers cannot reach hay stacks because of snowed-in access to the hay.

The next State Flood Coordination Center meeting will be held January 9, 1997 at 1:30 p.m. in the commission meeting room in the Devils Lake city offices located at 423 6th Street in Devils Lake. State Flood Coordination Center meetings are currently scheduled every month.

Signed \_\_\_\_\_  
Douglas C. Friez, State Director

